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PATENT AND TECHNICAL TRANSLATION

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DECLARATION

The undersigned, Olaf Bexhoeft, hereby states that he is well acquainted with both the English and German languages and that the attached is a true translation to the best of his knowledge and ability of the German text of PCT/DE03/01332, filed 04/24/2003 and published 11/06/2003 under No. WO 03/091024 A1.

The undersigned further declares that the above statement is true; and further, that this statement was made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or document or any patent resulting therefrom.

Olaf Bexhoeft

Specification

Devices for Fixing at Least One Packing to a Cylinder of a Rotary Printing Press and Printing Group Comprising Said Devices

The invention relates to devices for fastening at least one dressing on a cylinder of a rotary printing press in accordance with the preambles of claims 1, 9 or 33, and a printing group having these devices in accordance with the preamble of claims 26 or 30.

A device for bracing and/or clamping flexible plates with beveled suspension legs is described in DE 199 24 785 A1, wherein a suspension leg is arranged in a cylinder groove in a manner wherein it can be pressed against a groove wall by a pivotably seated profiled strip, which is provided with three arms, while another suspension leg with a clamping roller is arranged to be pressed against another location of the groove wall. Moreover, it is known from this publication that the profiled strip can be divided into several shorter profiled strips, or a support strip supporting the profiled strip can be divided into several shorter support strips, wherein adjoining support strips are connected with each other by means of a coupling, for example a tooth arrangement at both ends. A free end of the first and last support strip located in the cylinder groove are connected, fixed against relative rotation, which itself is fastened with its parts covering the cylinder groove to an end coupling piece to the flanks of the cylinder, for example by screwing.

A device for clamping and releasing of flexible plates with beveled suspension legs is known from DE 199 24 787 A1, wherein

two cooperating strips are provided in a cross-sectional surface extending axially in respect to the groove, which are charged in opposite directions by a spring with a force, wherein each end of the two springs is supported on an interior wall of a base body arranged in the groove, and wherein this support point of the springs is located substantially orthogonally in respect to the bearing point of the springs. Although the springs exert the force on the strips which is necessary for clamping, they do not simultaneously fix all of the strips in place in their bearing points during clamping.

The object of the invention is based on creating devices for fastening at least one dressing on a cylinder of a rotary printing press, and a printing group having these devices.

In accordance with the invention, this object is attained by means of the characteristics of claims 1, 9, 26, 30 or 33.

The advantages to be gained by means of the invention reside in particular in that an embodiment, which is simple and can be produced cost-effectively, of the device is possible, which is provided with a holding means, or a clamping element, for fastening at least one dressing on a cylinder of a rotary printing press.

In particular, in connection with pressing the holding means, or clamping element, against a wall of the opening of the groove, an effective clamped fastening of at least one leg of a dressing, introduced into the opening of the groove, which rests on the surface of the cylinder, can be provided, wherein the holding means, or clamping element, are simultaneously dependably fixed in place in the groove.

Neither a profiled strip provided with three strip-shaped arms, which is therefore designed in a complicated manner, nor a

clamping roller, which must be guided between the profiled strip and a support strip used as an abutment and pressed against a suspension leg resting against the groove wall for the purpose of an indirect clamping, are required for fastening the dressing. In the same way, a coupling between adjoining support strips and consisting of a tooth arrangement, for example, for arranging the individual support strips in the cylinder groove in a manner fixed against relative rotation, is also omitted, because in accordance with the solution proposed here the clamping device is supported in the groove of the cylinder itself. If several clamping devices are arranged in the groove of the cylinder, this characteristic applies to each individual clamping device. Thus, the structure of the clamping device known from DE 199 24 785 A1, consisting of at least a profiled strip, a support strip and a clamping roller, is made simpler and therefore more cost-effective.

That embodiment of the device, wherein at least the leg of the trailing end of the dressing has been at least partially designed as a rocker, is particularly advantageous wherein, following the introduction of the leg into the opening of the groove, this rocker is supported with its bearing point on the wall of the opening or on the wall of the groove. In the process, the clamping element braces the dressing with it leg embodied as a rocker.

Two exemplary embodiments of the invention are represented in the drawings and will be described in greater detail in what follows.

Shown are in:

Fig. 1, a device for fastening a plate-shaped printing forme on a cylinder,

Fig. 2, a device for fastening a printing blanket, which transmits the printed image, on a cylinder.

In accordance with a first embodiment variation represented in Fig. 1, a dressing 03a, for example a plate-shaped printing forme 03a, is fastened on a surface 02 of a cylinder 01a in that beveled legs 04, 05 at the ends of the dressing 03a are introduced into a groove 06a arranged in a cylinder 01a, which has an opening 07 pointing toward the surface 02 of the cylinder 01a, and are there substantially placed against the walls 08, 09, located near the surface, of the opening 07. The legs 04, 05 can also partially rest against a wall 10 of the groove 06a following the area of the opening 07 and located deeper in the interior of the cylinder 01a, because the boundary between the walls 08, 09 of the opening 07 and the wall 10 of the groove 06a extends floatingly. Accordingly, it is intended by this information to merely indicate that the introduction depth of the legs 04, 05 is not exactly fixed, but instead embraces a large tolerance range. Without any effects which would hamper the invention, the groove 06a can have various cross-sectional diameters, however, a circular cross section - as represented in both drawing figures - is advantageous from the viewpoint of production technology.

Without limiting the invention to the simplified representation which follows, the description of the invention will be provided here for simplicity's sake in such a way as if only one dressing, looped around the cylinder, were to be fastened. It is easily clear to one skilled in the art that several dressings in accordance with the invention described here could be fastened to the cylinder, either in its axial direction as well as in its circumferential direction wherein, however, in

case of several dressings in the circumferential direction several grooves are also provided.

Viewed in the production direction P, the dressing 03a to be fastened on the cylinder 01a has a leading end 11 and a trailing end 12, each with a beveled leg 04, 05. Also, viewed in the production direction P of the cylinder 01a, the opening 07 of the groove 06a has a front edge 13, from which a first wall 08 extends toward the groove 06a, as well as a rear edge 14, from which a second wall 09 also extends in the direction toward the groove 06a. The opening 07 on the surface 02 of the cylinder 01a is embodied to be long and narrow, and therefore slit-shaped, wherein the slit width S in the surface 02 in comparison with the depth t of the groove 06a, which can be 30 mm, for example, is slight and of such a size, that a leg 04 of a leading end 11 of a dressing 03a and a leg 05 of a trailing end 12 thereof, or - in case of several dressings fastened in the circumferential direction of the cylinder 01a - of an identical dressing 03a, can be arranged one behind the other in the opening 07. Slit widths of less than 5 mm, preferably in the range between 1 mm to 3 mm, are advantageous.

Between the wall 08 extending from the front edge 13 toward the groove 06a and an imagined tangent line T resting on the surface 02 of the cylinder 01a against the opening 07, an acute angle α has been formed, which is between 40° and 50°, preferably 45°. Thus, the opening 07 tapers toward the surface 02 of the cylinder 01a, and it widens toward the groove 06a. The leg 04 of the leading end 11 of the dressing 03a can be suspended in the front edge 13 of the opening 07, so that this leg 04 rests, preferably with positive contact, against the wall 08 extending from the front edge 13 to the groove 06a. In the example

represented in Fig. 1, the wall 09 drops at the rear edge 14 of the opening 07 approximately vertically toward the groove 06a. However, the wall 09 can be slightly inclined, so that the opening 07 widens toward the groove 06a. An angle ß, which results as the opening angle between the wall 09 extending from the rear edge 14 toward the groove 06a and the already mentioned tangent line T resting on the surface 02 of the cylinder 01a against the opening 07, lies in the range between 80° and 95°, for example, and is preferably 90°.

As a rule, the groove 06a extends axis-parallel in respect to the cylinder 01a. Approximately diametrically opposite the slit-shaped opening 07 a recess, for example a groove 15, is located in the wall 10 of the groove 06a, into which a plate-shaped, dimensionally stable holding means 16 is inserted - preferably loosely - and pivotably seated. Accordingly, the groove 15 is a bearing point 24 and support point 24 of the holding means 16 designed as a lever. For being able to pivot the holding means 16 in the groove 15, the width B of the groove 15 is of a larger size than the thickness D of the holding means 16.

In addition to the position of the bearing point 24 of the holding means 16 exactly diametrically opposite the opening 07 shown in Fig. 1 on the wall 10, and still in the area of the bottom of the groove 06a, it can also deviate in a clockwise direction by up to approximately 30° from a vertical line starting at the opening 07 on the side facing the front edge 13, an angle between 15° and 20° can be advantageous in particular (see Fig. 2).

The holding means 16 is embodied in such a way that it has a first, upper end 18, which can be placed against one of the two walls 08 or 09 of the opening 07, and a second, lower end 19,

located opposite the opening 07. A spring element 17, for example a compression spring 17 embodied as a leaf spring 17, is attached to the holding means 16 and is preferably directly supported on the wall 08 extending from the front edge 13 of the opening 07, or on the wall 10 of the groove 06a in such a way, that the pivotable seated second, lower edge 19 of the holding means 16 is fixed in place at its bearing point 24, i.e. in the groove 15, and that at the same time the first, upper end 18 of the holding means 16 is pressed against the wall 09 extending at the rear edge 14 of the opening 07, so that a clamping point 25 results at the first, upper end 18 of the holding means 16. Thus, by their cooperation the holding means 16 and the spring element 17 constitute a clamping device effective in the groove 06a. Preferably the spring element 17 is pre-stressed and in this way stabilizes the holding means 16 in its position in the groove 06a and secures the holding means 16 against inadvertently falling out of the opening 07. To achieve the simultaneous clamping and fixation in place, it is necessary for the spring element 17 to exert, because of its support in the support point 23, i.e. in particular because of the position and/or shaping of this support point 23, a force of sufficient size for fixing the holding means 16 in place at its bearing point 24, in particular by pushing it against its bearing point 24. Because of this the support point 23 of the spring element 17 is arranged spatially closer to the opening 07 than to the bearing point 24 of the holding means 16. Fixation in place is achieved in a simple manner in that the spring element 17 is preferably supported on the wall 08 extending from the front edge 13 of the opening 07, or preferably in direct contact with the wall 10 of the groove 06a, in such a way that forces F1, F2 are simultaneously received in the support point 23 of the spring

element 17 in two directions, which extend vertically in respect to each other in the cross-sectional plane of the groove 06a. This absorption of the forces becomes possible because the support point 23 is in particular located at a spot where, because of the acute angle α of the opening 07, the wall 08 extending from the front edge 13 toward the groove 06a forms an inclined surface facing the support point 23 of the spring means 17. Respective force components are formed at this inclined surface in the support point 23 of the spring element 17 as counterforces to the support force components F1, F2, wherein one force component as the counterforce to F2 exerts the force required for clamping the leg 05 introduced into the opening 07, while a further force component acts in the direction of the bearing point 24 of the holding means 16 to press it into the groove 15 in order to stabilize its position in the course of the rotation of the cylinder 01a. An alternative design of the inclined surface can consist in that the wall 08 extending from the front edge 13 has a recess or is shaped in such a way that the distribution of forces previously described can take place in the support point 23 of the spring element 17. A helical compression spring 17, correspondingly arranged in the groove 06a, can also be employed as the spring element 17 in place of the leaf spring 17. Although the support point 23 of the spring element 17 is preferably located directly on the wall 08, with a leg 05 designed to be longer it can also be located on the latter, so that the spring element 17 is indirectly supported on the wall 08. In the latter case the spring element 17 is not in direct contact with the wall 08, although the above described division of forces occurs. The holding means 16 can be allowed to have vertical play in the groove 15, as long as it is assured that the holding means 16 does

not slide out off the opening 07 in any operational situation and is fully functional for clamping.

In actual use, th support point 23 is preferably located on the wall 08 extending from the front edge 13 to the groove 06a directly following the end of the leg 04 of the leading end 11, which is suspended in the front edge 13, of the dressing 03a. A distance a between the end of the leg 04 and the support point 23 is preferably less than 5 mm, in particular less than 3 mm. Several holding means 16 with associated spring elements 17 can of course be arranged in the longitudinal direction of the groove 06a, but only a single holding means 16 is arranged in each cross-sectional plane of the groove 06a.

An actuating means 20 acts counter to the contact pressure exerted by the spring element 17 via the holding element 16 on the wall 09 extending from the rear edge 14 of the opening 07, in order to release the clamping provided by the holding means 16 on the wall 09, when required, by actuating the actuating means 20. The actuating means 20 preferably is a hose 20 extending in the longitudinal direction of the groove 06a, which can be charged with a pressure medium, for example compressed air, and can be bordered by an abutment 21. In this case the abutment 21 of this actuating means 20 is an enclosure supported on the wall 10 of the groove 06a and reduces by means of its shape the volume increase of the hose 20 required for releasing the clamping, and in this way contributes to a shorter reaction time of the actuating means 20. In a different realization of the actuating means 20, an abutment 21 in the form herein described may be unnecessary.

Furthermore, the embodiment represented in Fig. 1 shows a particularly advantageous further embodiment, wherein the leg 05 of the trailing end 12 is designed as a rocker wherein, following

the introduction of the leg 05 into the opening 07 of the groove 06a, the bearing point 22 of this rocker is supported at the wall 09 of the opening 07. Depending on the geometry used for shaping the edge 14 of the opening 07 against which a leg 05, designed as a rocker, of the trailing end 12 of the dressing 03a has been placed, it might also be that the bearing point 22 of the rocker is already located on the wall 10 of the groove 06a. Thus, the dressing 03a has a beveled leg 05 on its trailing end 12, which is shaped in such a way that this leg 05 has a further bevel projecting away from the wall 09 at an acute angle of, for example, 15°, which can be tilted into the bearing point 22 on the wall 09 of the opening 07, because of which the effective direction of the clamping of the leg 05 of the trailing end 12 is reversed, and generates a tensile stress on the dressing 03a resting on the surface 02 of the cylinder 01a, which pulls the trailing end 12 of the dressing 03a in the direction toward the front edge 13 of the opening 07. The position of the bearing point 22 of the rocker can be selected to be such that a lever arm results between the bearing point 22 of the rocker and the bevel of the leg 05 at the edge 14 of the opening 07, which lever is approximately twice as long as the one between the bearing point 22 of the rocker and the clamping point 25 between the leg 05 and the holding means 16. This solution has the advantage that production tolerances in the length of the dressing 03a can be compensated in a simple manner. Dressings 03a of too great a length have a tendency to become displaced on the surface 02 of the cylinder 01a. Furthermore, with a dressing 03a, which does not rest fully on the surface 02 of the cylinder 01a, a break, for example of its trailing end 12, can occur because of the flexing action exerted on it in the course of the production process of

the cylinder 01a. In accordance with the solution proposed here, the holding means 16 does not only clamp the dressing 03a in the previously described manner, the dressing 03a is additionally braced by the leg 05 designed as a rocker. With an appropriate pre-tensioning of the spring element 17, the rocker of the leg 05 and the spring element 17 form an additional bracing system for the dressing 03a in the course of their cooperation and together with the holding means 16, which automatically compensates changes in the length of the dressing 03a.

Fig. 2 shows, as a further exemplary embodiment, a device for fastening a printing blanket 30 for transferring a printed image to a cylinder 01b, for example a transfer cylinder 01b of an offset printing press, wherein the printing blanket 30 has been applied to a support plate 31, which rests on the surface 02 of the cylinder 01b, is flexible, but dimensionally stable in its superficial extent, and the support plate 31 has beveled legs 34, 35 on its two oppositely located ends, which are to be fastened and can be introduced into a groove 07 oriented toward an opening 07 in the surface 02 of the cylinder 01b. The dressing 03b being used here has as a rule a complex layer structure which, however, consists at least of a support plate 31 and a printing blanket 30 applied to it. Analogously to the embodiment of the device represented in Fig. 1, the support plate 31 to be fastened on the cylinder 01b has a leading end 32 and a trailing end 33 in the production direction P of the cylinder 01b. Here, too, the opening 07 of the groove 06b has, viewed in the production direction P of the cylinder 01b, a front edge 13 with a first wall 08 extending into the groove 06b, and a rear edge 14 with a second wall 09 also extending into the groove 06b. Between the wall 08 extending from the front edge 13 to the groove 06a and an imagined

tangent line T resting on the opening 07 in the surface 02 of the cylinder 01a an acute angle α has also been formed, which lies between 40° and 50°, preferably at 45°. The leg 34 of the leading end 32 of the support plate 31 rests, positively connected, against the first wall 08 extending from the front edge 13. But differently from the embodiment represented in Fig. 1, here the leg 35 of the trailing end 33 of the support plate 31 preferably also rests against the first wall 08, and in this case - with the greater part of its surface and preferably frictionally connected - directly on the leg 34 of the leading end 32 of the support plate 31. The leg 35 of the trailing end 33 of the support plate 31 therefore is beveled at an obtuse angle gamma, which lies within the range of 130° and 140°, and preferably gamma ≡ 135°. The wall 09 extending from the rear edge 14 toward the groove 06b, together with the already mentioned tangent line T resting on the opening 07 in the surface 02 of the cylinder 01b, forms an angle ß, the same as in the previously described example, which lies within the range between 80° and 95° and preferably is almost a right angle.

A clamping element 36 which, in this example is provided with a projecting arm and is dimensionally stable per se, has a first (upper) end 38 and a second (lower) end 39, wherein the second (lower) end 39 is pivotably seated in a bearing point 40, preferably close to the bottom of the groove 06b, wherein the bearing point 40 is embodied as a recess in a base body 41, for example, and the recess has a supporting surface 44, for example, for the lower end 39 of the clamping element 36. The bearing point 40 of the clamping element 36 can - as previously explained in connection with the first embodiment of the invention - deviate in a clockwise direction by up to 30° from a vertical line

starting at the opening 07 on the side facing the front edge 13, an angle between 15° and 20° can be advantageous in particular. The base body 41 is preferably secured against twisting in the groove 06b. The base body 41 can be made of a plastic material or a metallic material. If several clamping element 36 are provided in the longitudinal direction of the groove 06b, each of the clamping elements 36 can be arranged in a base body 41, and the base bodies 41 are lined up against each other in the groove 06b.

By means of a spring element 37, for example a helical compression spring 37 or a leaf spring 37, which is preferably encased in the base body 41 and is supported therein at a support point 43 and forms a clamping device together with the clamping element 36, a contact pressure is exerted with the first (upper) end 38 of the clamping element 36 on the legs 34 and 35 resting on top of each other against the wall 08 of the front edge 13, by means of which both legs 34 and 35 are clamped to the first wall 08. The first (upper) end 38 of the clamping element 36 is supported in the clamping point 45 between the clamping element 36 and the leg 35 at the trailing end 33 of the support plate 31 of the dressing 03b on the wall 08 extending from the front edge 13 of the opening 07, or on the wall 10 of the groove 06b, in such a way that forces F1, F2 at the clamping point 45 are simultaneously absorbed in two directions, which extend vertically on top of each other in the cross-sectional plane of the groove 06b. Because of the acute angle α, the clamping point 45 again lies on an inclined surface. With this embodiment variation the clamping point therefore lies in the area of the wall 08 which is covered by the two legs 34 and 35 which lie on top of each other. The clamping device with the pivotably seated clamping element 36, in particular the bearing point 40 of the clamping element 36,

remains fixed in place in the groove 06b because of its support and the force distribution provided along with it.

The spring element 37 is preferably pre-stressed and, in particular in cooperation with the security against twisting of the base body 41, by means of the action of its force on the clamping element 36 it causes the seating, fixed in place, of the clamping element 36 by means of the effect of a force component of sufficient size. In the embodiment represented in Fig. 2, the groove 06b has a circular cross section. In its outer shape, the base body 41 is preferably matched to the contours of the groove 06b, or is supported in at least three support points on the wall 10 of the groove 06b. For example, an arresting element 42 formed as a stop on the base body 41 projects into the opening 07 and is supported on the second wall 09 of the opening 07. In this way the base body 41 is secure against twisting, in particular in a circular groove 06b. Such a twist prevention of the relatively inexpensive base body 41 is in particular of advantage if, for example, no groove 15 is provided for the holding means 16 or the clamping element 36 in the groove 06a, 06b, because the cutting of a groove 15 had been omitted for reasons of cost. With an appropriate cross-sectional geometry of the groove 06b, for example an angular one, the base body 41 can be designed in such a way that it is supported, secure against twisting, on the wall 10 of the groove 06b.

An actuating means 20 has been provided in the base body 41, which counteracts the contact pressure exerted by the spring element 37 via the clamping element 36 on the first wall 09 of the opening 07 in order to release, when desired, the clamping caused by the clamping element 36 on the first wall 09 when the actuating means 20 are operated. The actuating means 20 are again

preferably a hose 20 extending in the longitudinal direction of the groove 06b, which can be charged with a pressure medium, for example compressed air, and can be encased by the base body 41.

With this embodiment it is also assumed that only a single clamping element 36 is arranged in each cross-sectional plane of the groove 06b, but that several clamping elements 36 with associated compression springs 37 can be easily arranged in the longitudinal direction of the groove 06b. It is common to both embodiments shown that a holding means 16, or clamping element 36, is pivotably - preferably loosely - seated in the groove 06a, 06b by one end, i.e. only one end 19, 39, wherein clamping of the leg 05, 35 of the trailing end 12, 13 of the dressing 03a, or of the support plate 31, as well as a fixation in place of the holding means 16, or of the clamping element 36, in their bearing points 24, 40 is achieved by means of a spring element 17, 37, which is in operative connection with the holding means 16, or the clamping element 36. Fixation in place of the clamping device formed by the holding means 16, or the clamping element 36, and the spring element 17, 37 takes place in such a way that, with the inclusion of the clamping point 25, 45 existing between the holding means 16, or the clamping element 36, and the leg 05, 35 of the trailing end 12, 33 of the printing forme 03a, or the support plate 31, because of its pre-stress the spring element 17, 38 stabilizes the holding means 16, or the clamping element 36, secure against twisting, if necessary with the aid of an arresting element 42 formed on the base body 41. Although the bearing point of the holding means 16, or of the clamping element 36, does allow the holding means 16, or the clamping element 36, to pivot, it is fixed in place, at least during the clamping process, in respect to its position in or in relation to the groove 06a, 06b. In this

embodiment the spring element 17, 37, or the holding means 16 or the clamping element 36, is supported indirectly or directly at a support point 23, 45 on that wall 08, 09 which, in the opening 07, is located opposite that wall 08, 09 on which the stop 42 is supported.

Thus, each of the described embodiments relates to a device for fastening at least one dressing 03a, or a support plate 31, on a cylinder 01a, 01b, having a clamping device, fixed in place secure against twisting on a wall 10 of the groove 06a, 06b, or on the walls 08, 09 of the opening 07, with a holding means 16, or a clamping element 36 pivotably seated in or at the bottom of the groove 06a, 06b, wherein the clamping device is arranged in a base body 41, if desired, and wherein the spring element 17, 37 or the clamping element 36 at the same time absorb in their support point 23, or clamping point 45, forces F1, F2, in two directions extending vertically on top of each other in the cross-sectional plane of the groove 06a, 06b, and at the same time perform the function of clamping and fixation in place by means of the resulting counter-forces.

The above described embodiments of the device for fastening at least one dressing on a cylinder can be realized in the same printing group of a rotary printing press in that a cylinder 01a with a printing forme 03a in accordance with the first exemplary embodiment rolls off on a cylinder 01b with a dressing 03b in accordance with the second exemplary embodiment. Thus, a plate-shaped printing forme 03 fastened on the surface 02 of the first cylinder 01a rolls off on a printing blanket 30, which has been applied to the surface 02 of the second cylinder 01b by means of a support plate 31. In this case the cylinder 01a in accordance with the first exemplary embodiment constitutes a forme cylinder,

and the cylinder 01b in accordance with the second exemplary embodiment constitutes a transfer cylinder. Furthermore, the clamping device consisting of a holding means 16 and a leaf spring 17 and arranged in the groove 06a of the forme cylinder 01a, can be encased in a base body 41, wherein recesses in the base body 41 make possible the previously described pivotability and support of the clamping device.

In that case this printing group is also distinguished, for example, by an approximately right angle ß being formed between the wall 09 extending from the rear edge 14 to the groove 06a of the forme cylinder 06a and the tangent line T resting on the opening 07 in the surface 02 of the forme cylinder 01a, wherein the trailing end 12 of the printing forme 03a is maintained on the wall 09 extending from the rear edge 14 to the groove 06a, and in that the leg 35 on the trailing end 33 of the support plate 31 forms an obtuse angle gamma with the tangent line T resting on the opening 07 of the transfer cylinder 01b and is maintained, together with the leg 34, at the leading end 32 of the support plate 31, on the wall 08 extending from the front edge 13 to the groove 06b.

List of Reference Numerals

01a	Cylinder, forme cylinder
01b	Cylinder, transfer cylinder
02	Surface of the cylinder
03a	Dressing, printing forme
03b	Dressing consisting of a printing blanket 30 and a support plate 31
04	Leg at the leading end of the dressing 03a, 03b
05	Leg at the trailing end of the dressing 03a, 03b
06a, 06b	Groove
07	Opening of the groove 06a, 06b
08	Wall extending from the front edge of the opening 07 into the groove 06a, 06b, first wall
09	Wall extending from the rear edge of the opening 07 into the groove 06a, 06b, second wall
10	Wall of the groove 06a, 06b
11	Leading end of the dressing 03a
12	Trailing end of the dressing 03a
13	Front edge of the opening 07
14	Rear edge of the opening 07
15	Groove in the wall 10 of the groove 06a
16	Holding means
17	Spring element, leaf spring, compression spring
18	First (upper) end of the holding means 16
19	Second (lower) end of the holding means 16
20	Actuating means, hose
21	Abutment

22	Bearing point on the wall 09 of the opening 07 for a leg 25, embodied as a rocker, at the trailing end of the dressing 03a
23	Support point of the spring element 17 at the wall 08 of the opening 07 or at the wall 10 of the groove 06a
24	Bearing point, support point of the holding means 16 in a groove 15 of the groove 06a
25	Clamping point between the holding means 16 and the leg 05 at the trailing end 12 of the dressing 03a
26	-
27	-
28	-
29	-
30	Printing blanket
31	Support plate of a printing blanket 30
32	Leading end of the dressing 03b composed of the support plate 31 and the printing blanket 30
33	Trailing end of the dressing 03b composed of the support plate 31 and the printing blanket 30
34	Leg on the leading end of the support plate 31
35	Leg on the trailing end of the support plate 31
36	Clamping element
37	Spring element
38	First (upper) end of the clamping element 36
39	Second (lower) end of the clamping element 36
40	Bearing point of the lower end 39 of the clamping element 36
41	Base body
42	Arresting element on the base body 41

43	Support point of the spring element 37 at the base body 41
44	Supporting surface for the clamping element 36 on the base body 41
45	Clamping point between the clamping element 36 and the leg 35 at the trailing end 33 of the support plate 31 of the dressing 03b
a	Distance
t	Depth of the groove 06a, 06b
B	Width of the groove 15
D	Thickness of the holding means 16
P	Production direction of the cylinder 01a, 01b
S	Slit width of the opening 07
T	Tangent line resting on the opening 07 in the surface 02 of the cylinder 01a, 01b
α	Angle between the wall 08 extending from the front edge 13 to the groove 06a, 06b and a tangent line T resting on the opening 07 in the surface 02 of the cylinder 01a, 01b
ß	Angle between the wall 09 extending from the rear edge 14 to the groove 06a, 06b and a tangent line T resting on the opening 07 in the surface 02 of the cylinder 01a, 01b
gamma	Bevel angle of the leg 35 at the trailing end of the support plate 31

F1, F2 Forces in two directions extending vertically on each other in the cross-sectional plane of the groove 06a, 06b at the support point 23, or the clamping point 45